

Figure 1

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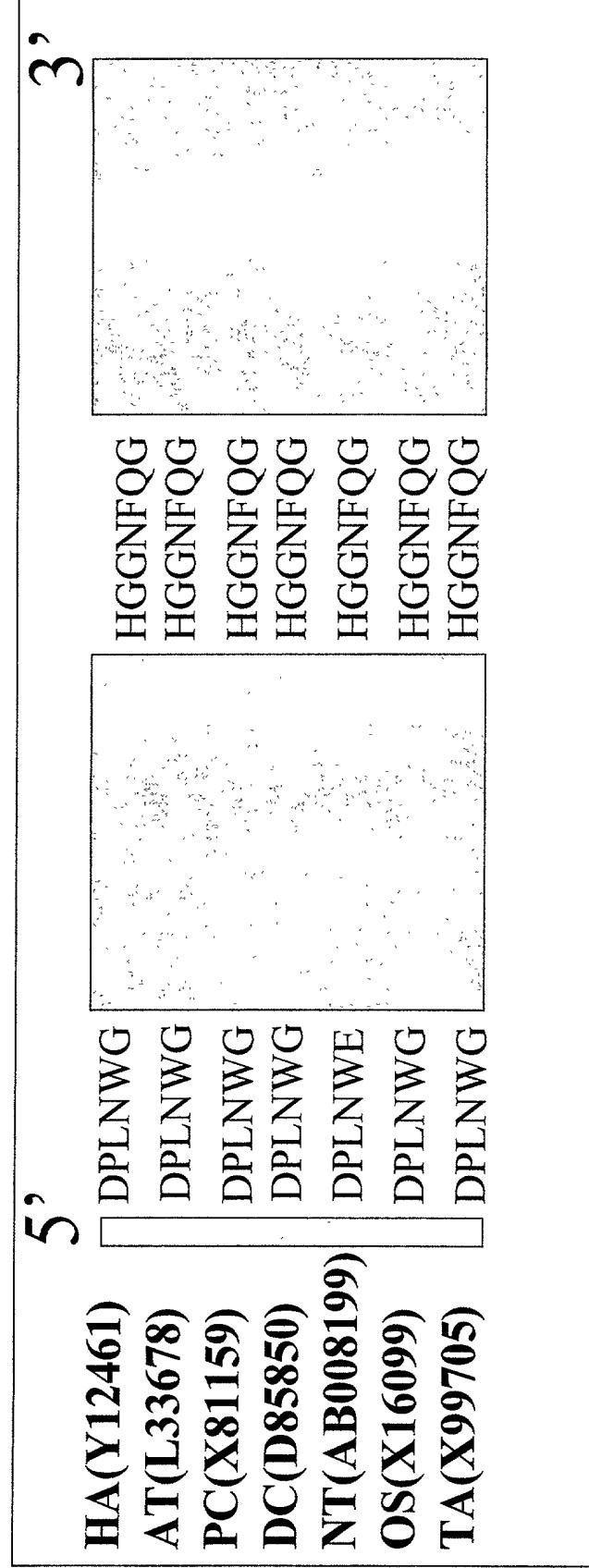
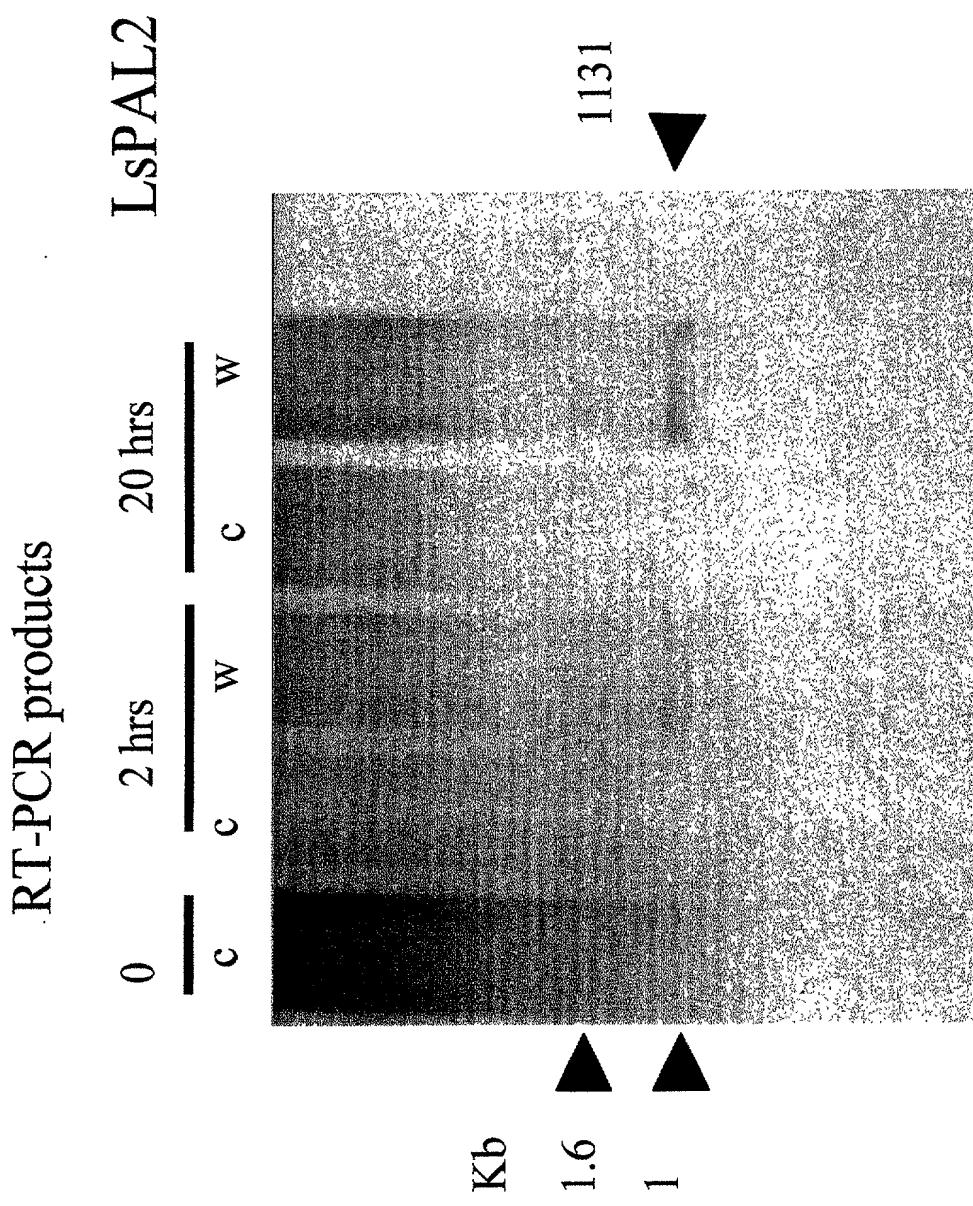


Figure 2

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Figure 3



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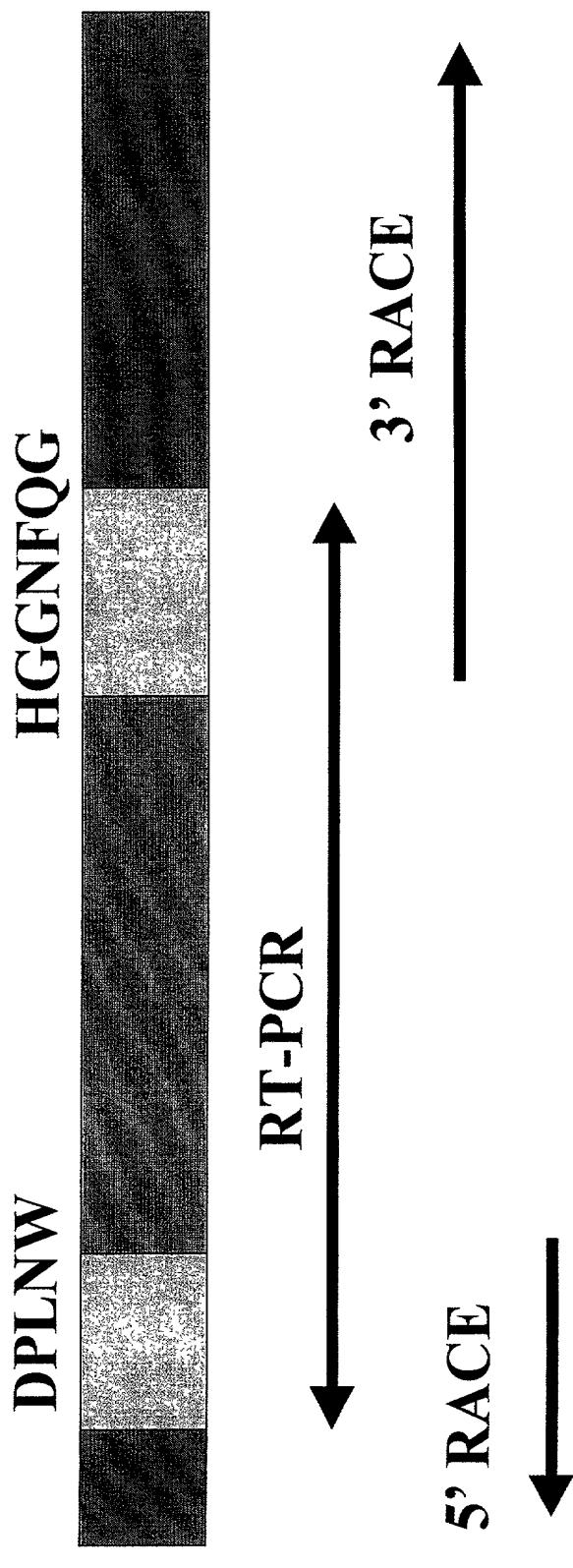


Figure 4

PAL1

1 GAGCAATCTG ATCAATACCC ATTACCGCAC AAAGAGTGTG AGTCTAGTGT GTGAAGAAGT
 61 ACACAATTAG ATTGTTCTTG TTTCTTGAT CTATAGTCTA CAATCTGTAT AAATAATAAT
 121 GGAGAACGGT AATCACGTTA ATGGAGTCGT TAATGAGTTG TGCATCAAGG ATCCATTGAA
 181 CTGGGGAGTT GCAGCGGAGG CGTTGACCGG AAGTCACCTT GATGAGGTGA AGAAGATGGT
 241 TGCGGAGTTC AGAAAGCCGG TGGTGAAGCT CGGAGGAGAG ACGCTTACAG TTTCTCAGGT
 301 GGCAGGGATC GCAGCTGCTA ATGACAGTGA CACCGTGAAG GTGGAGCTGT CGGAAGCCGC
 361 GAGGGCTGGA GTTAAGGCGA GTAGTATTG GTTATGGAG AGCATGAATA AAGGAACACTA
 421 TAGTTATGGT GTCACCACCG GCTTCGGCGC CACCTCTCAC CGGAGAACTA AGCAAGGCCG
 481 TGCTTACAG AAGGAGCTCA TTAGATTTT GAACGCCGGA ATATTGGCA ATGGAACGG
 541 AACAAAGCCAC ACACCTCCAC ATTCAAGCCAC CAGAGCCGCC ATGATCGTCA GAATCAACAC
 601 CCTCCTCCAG GGTACTCCG GCATCCGATT CGAGATCTG GAAGCCATCA CCAAGTTCCT
 661 TAACAACAAAC ATCACCCCTT GTTACCCCT CGTGGAAACC ATCACCGCCT CCGGTGACCT
 721 TGTCCCATTAA TCATACATCG CGGCCCTCTT ACCGGCCCGC CCCAACTCCA AAGCCGTG
 781 CCCCACCGGA GAAGTCCTCA ATGCCGAAAAA GGCCTTCGCT GCAGCCGGAG TTGAAGGGTGG
 841 GTTCTTCGAG TTACAGCCGA AAGAAGGGCT AGCACTTGT AACGGCACCG CCCTGGGGTC
 901 CGGGATGGCT TCCATGGTT TATTGATGC TAATGTACTT GCGTTGTGT CGGAAGTGT
 961 ATCGGCGATC TTGCTGAGG TTATGCAAGG GAAGCCGGAG TTACCGATC ACTTGACACA
 1021 CAAATTGAAAG CATCACCCCTG GTCAAATCGA GGCAGCCGGCG ATCATGGAGT ATATTTGGA
 1081 CGGAAGCGAT TACGTCAAGG CGGCCGAAAAA GGTCCACGAA ATGGACCCGT TACAGAAACC
 1141 AAAACAAGAT CGTTATGCTC TCCGTACATC TCCCCAATGG CTGGACCTC AAATCGAAGT
 1201 AATCCGATCA TCAACCAAAA TGATCGAGAG GGAAATCAAT TCCGTCAACCG ACAACCCATT
 1261 GATCGACGTT TCCAGAAACA AAGCTTACA CGGTGGTAAC TTCCAAGGAA CCCCAATCGG
 1321 AGTTCCATG GACAACACCC GTCTGCCAT TGCTGCAATC GGAAAACCTCA TGTTCGCTCA
 1381 ATTTCTGAG CTGGTTAACG ATTTCTACAA CAATGGATTAA CCATCGAATC TCTCCGGTGG
 1441 ACGTAACCCCT AGTTGGACT ACGGGTTCAA AGGTGGAGAA ATCGCCATGG CTTCTTACTG
 1501 TTCTGAGCTT CAGTTCTCG CAAATCCAGT CACCAACCAT GTTCAAAGCG CCGAACAAACA
 1561 CAATCAAGAC GTTAATTCTC TCGGATTAAT TTCAGCGAGG AAAACCGCAG AAGCAGTCGA
 1621 CATCTAAAAA CTCATGTCGT CGACATACTT AGTCGCTCTA TGCCAATCCA TCGATTACG
 1681 CCATTGGAAG GAGAACATGA AATCGACAGT GAAGAACACC GTAAGCCAAG TCGCGAAAAAA
 1741 GGTCTCACC ATGGCGTCA ACGGCAGCT CCACCCGTCG AGATTCTGCG AGAAAGATCT
 1801 CCTCCGTGTT GTTGATCGTG AATACGTCTT CGCTTACATC GACGACGTT GCAGCGGCAC
 1861 ATACCCATTAA ATGCAGAACG TCCGACAGGT TCTGGTCGAC CACGCTCTAA ACAACGGCGA
 1921 AACGGAGAAG AACACTAACAA CCTCCATCTT CCAAAAGATC GCTACCTCG AAGAAGAATT
 1981 GAAAGCTCTG TTACCGAAAG AAGTTGAAGG TGTTAGAATC GCTTATGAGA ATGATACATT
 2041 GTCGATTCCA AACAGGATTA AAGCTTGCAG ATCGTACCCG TTGTATAGGT TTGTAAGGGA
 2101 GGAGCTCGGC AGAGGGTTT TGACCGGAGA AAAGGTGACG TCGCCGGGAG AGGAGTTCGA
 2161 CAGGGTGTTC ACGGCGATGT GCAAAGGTCA AATTATTGAT CGGTGTTGG AGTGTCTGG
 2221 AGGGTGAAT GGGGAACCTC TTCCAATATG TTAGGAAAGT GAGTGTGAAA CCGTTGAAT
 2281 TGTATTGTA ATATTCTGTT TTTTTTTTT TTTTTAAAT TTATTTGCA TTTAATATCT
 2341 CATCAAAGAC TTCCACTTTC AAGTGTGGTG TATGTGGTG TAAATCATAT ATATTAACCT
 2401 ATTATTTTG CTAAAAAAAAA AAAAAAAAAA AAAAAAAAAA AA

Figure 5

Sequence I.D. No. 3

PAL1

translation="MENGNHVNGVVNELCIKDPLNWGVAAEALTGSHLDEVKKMVAEFRKPVV
KLGGETLTVSQVAGIAAANDSDTVKVELSEAARAGVKASSDWVMESMNKGTD SYGVT
TGFGATSHRRTKQGGALQKELIRFLNAGIFGNGTETSHTLPHSATRAAMIVRINTLLQGY
SGIRFEILEAITKFLNNNITPCPLRLRGTTASGDLVPLSYIAGLLTGRPNSKAVGPTGEVLN
AEKAFAAAGVEGGFFELQPKEGLALVNGTAVGSGMASMVLFDANVLALLSEVLSAIFA
EVMQGKPEFTDHLTHKLKHHPGQIEAAAIMEYILDGSDYVKAAQKVHEMDPLQPKQD
RYALRTSPQWLGPQIEVIRSSTKMIEREINSVNDNPLIDVSRNKALHGNFQGTPIGVSM
DNTRLAIAAIGKLMFAQFSELVNDFYNNGLPSNLSSGRNPSLDYGFKGGEIAMASYCSE
LQFLANPVTNHVQSAEQHNQDVNSLGLISARKTAEAVDILKLMSS TYLVALCQSIDLH
LEENMKSTVKNTVSQVAKKVLTMGVNGELHPSRFCEKDLLRVVDREYVFA YIDDVC SG
TYPLMQKLRQVLVDHALNNGETEKNTNTSIFQKIATFEEELKVLLPKEVEGVRIAYEND
TLSIPNRIKACRSYPLYRFVREELGRGFLTGEKVTSPGEEFDRVFTAMCKGQIIDPLLECL
GGWNGEPLPIC"

Figure 6

Sequence I.D. No. 1

PAL2

GCAGCAACGCCACTCACCAACCTCAATCCCTCATTCTCTCTCTAAAAAAACCAG
ACTCTGTAATTCTGATAATGGGCAGCACAGAAATGGAGGTTGATGCCATCAAAAC
GGTGAGAGAGCGGAGTTTGTGAAAGGGGATCCTTGAACGGGGATGGCGGC
GGAGTCATTAAAGGGTAGTCATTAGACGAGGTGAAGCGGATGGTGGCGGAGTTA
GGAAGCCGGTGGTGGAGATTGGTGGAGAGACGTTGACTGTGTCGCAGGTGGCGGCG
ATCGCCGCCAGTGATAACGCTGGGGTGAAGGTGGAACGGTCACTGTGCGAGACGGCGAGGGC
GGGGGTGAAGGCAGTAGTGATTGGTGGAGAGTATGAATAAAGGAACGGATA
GCTATGGTGTCACTACCGGGTTCGGAGCTACCTCTCACCGAGAACGAAAGAAGGTG
GTGCTCTCAGAAGGAGCTCATTAGATTCTGAACGCCGGAATATTGGTAATGGCA
CAGAATCAACCCACACACTCCACATTAGCCACAAGAGCAGCCATGCTTGTAGAA
TCAACACCCCTCCTCAAGGTTACTCCGCATCCGATTGAGATCTTGGAGGCGATCA
CCAAGTTCTCAACCACACGTCAACCCCTTCTCCCTCTCCGTGGGACAATTACCGC
CTCCGGCGATCTGCCCCATTATCCTACATCGCCGGTCTCTCACCGGCCGTGCCAAC
TCCAAAGCCGTTGGACCCACCGGAGAAGTTCTAAATGCCAAAAGGCCCTCGCGA
AGCCGGAGTTGAAGGTGGTTCTCGAGTTACAGCCAAAAGAAGGGCTAGCACTTGT
CAACGGCACCGCCGTGGGATCCGGATGGCGTCGATGGTGTATTGATGCTAATGT
TCTTGCATTGTTGTCGGAAGTGTATCGCGATCTCGCTGAAGTTATGCAAGGTAAG
CCGGAGTTACTGATCACTAACACACAAATTGAAGCATACCCCGTCAAATCGAG
GCGGCGGCGATCATGGAGTATATTGGACGGAAGCGATTACGTCAAGGCGGCGCA
AAAGGTCCACGAAATGGACCCGTTACAGAAAACAAAGATCGTTATGCTCTCCG
TACATCTCCCCAATGGCTCGGACCTCAAATCGAAGTAATCCGATCATCAACCAAAT
GATCGAGAGAGAAATCAACTCCGTCAACGACAACCCATTGATCGACGTTCCAGAAA
CAAAGCCTTACACGGTGGCAACTTCAAGGAACCCAAATCGGAGTTCCATGGATAA
CACACGTTGGCGATCGCCGCATCGGAAAGCTAATGTCGCTCAGTCTCTGAGCTT
GTCAACGATTTTACAACACGGTTGCCATCCAATCTCTCCGGCGGCCGGAATCCA
AGTTGGATTACGGGTTCAAAGGTGCAGAAATGCCATGGCTTCTACTGCTCTGAG
CTCCAGTTCTCGCCAATCCAGTCACAAACACAGTTCAAAGCGCCGAACAACACAAAC
CAAGATGTTAATTCTGGATTGATTTCAGCAAGAAAAACAGCAGAATCAGTCGAG
ATCTTAAACTCATGTCACCATACTTAGCTCTATGTCATCCATCGACTTGA
GGCATTTGGAAGAGAACCTGAAATCCACAGTGAAGAACACAGTGAAGCCTCGCG
AAGAAGATCCTAACCAACCGCGTCAATGGCGAGCTCCACCCCTCTCGCTCTGCGAG
AAAGACTTGCTCGTGTGGTCGACAGGGAGTATGTCATTGACATACGACGACGCT
TGCAGCGCCACCTACCCATTGATGTCAGAACGCTCCGACAGGTATCGTCGACCACGCA
TTAAACACGAAAATGACGCCGAACCTCCATCTTCAAAAGATCAGTGAATTGAA
GAGGAACTGAAAGCCGTTGCCAAAAGAAGTGGAGGGAGTTAGAAGCGCAATCGA
GAGTTGACATTGACGATTCCAACAGGATCAAGGAGTGTAGATCATACCCATTGTA
CAGGTTGTGAGAGAGGGAGCTGGAACAGGGTTTGACAGGGGAGGAGGTGACGT
CACCTGGAGAAGAGTTGATAAGGTGTTACTGCTTGTGCAAAGGACATATTATCG
ATCCATTGTTGGAGTGTGTTCAAGGGTGGAAATGGTGTCTCTCCGATTGATAGTT
ATTTGTTCATAAATACTTTATGAGTTGAGGGTTTGTAAGTCGCAACTCTCATG
CCAAATGTGTATGTAATTGTAATGTAATTGTACTATTGTATGTTGTAATTGTAACCGTTAAG
TGTACCTTTGTTCATAAAAAAAAAAAAAAAAAAAAAA

Figure 7

Sequence I.D. No. 4

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PAL2

MGSTEMEVDSHQNGERAECVKGDPNWGMAAESLKGSHLDE
VKRMVAEFRKPVVRLLGETLTVSQAAIAASDNAGVKVELSET
ARAGVKASSDWVMESMNKGTDSYGVTTGFGATSHRRRTKEGGA
LQKELIRFLNAGIFGNTESTHTLPHSATRAAMLVRINTLLQGY
SGIRFEILEAITKFLNHNVTPFLPLRGTTASGDLVPLSYIAGLLT
GRANSKAVGPTGEVLNAEKAFAEAGVEGGFFELQPKEGLALV
NGTAVGSGMASMVLFDANVLALLSEVLSAIFAEVMQGKPEFTD
HLTHKLKHHPGQIEAAAIMEYILDGSYVKAQKVHEMDPLQ
KPKQDRYALRTSPQWLGPQIEVIRSSTKMIEREINSVNDNPLID
VSRNKALHGGNFQGTPIGVSMDNTRLAIAAIGKLMFAQFSELV
NDFYNNGLPSNLSGGRNPSLDYGFKGAEIAMASYCSELQFLAN
PVTNHVQSSEQHNQDVNSLGLISARKTAESVEILKLMSTTYLV
ALCQSIDLRHLEENLKSTVKNTVSLVAKKILTTGVNGELHPSRF
CEKDLLRVVDREYVFAYIDDACSATYPLMQKLRQVIVDHALN
NENDAGTSIFQKISEFEEELKAVLPKEVEGVRSAYESSTLTIPNR
IKECRSYPLYRFVREELGTGFLTGEEVTPGEEFDKVFTALCKG
HIIDPLLECVQGWNGVPLPIS

Figure 8

Sequence I.D. No. 2

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| | | |
|-----|--|-----------|
| 1 | MENGTHVNGSANGFCIKDPLNWGVAAEALTGSHLDEVKKMVGEFRKPVK MENGNHVNGGVVNELCITKDPINWGVAAEALTGSHLDEVKKMVAEFRKPVK | Sunflower |
| 51 | LGGETLTWSQVAGISAGDGIMVKVELSEAARAGVKASSDWVMESMNKG LGGETLTWSOVAGIAANDSDTVKVELSEAARAGVKASSDWVMESMNKG | Lettuce |
| 51 | D SYGVTTGGATSHRRTRKGALORELIRFLNAGIEFGNGRESSHTLPHSA DSYGVTTGGATSHRRTRKGALORELIRFLNAGIEFGNGRESSHTLPHSA | Sunflower |
| 101 | D SYGVTTGGATSHRRTRKGALORELIRFLNAGIEFGNGRESSHTLPHSA DSYGVTTGGATSHRRTRKGALORELIRFLNAGIEFGNGRESSHTLPHSA | Lettuce |
| 151 | TRAAMIVRINTTLOGYSGIRFELILEAITKFLNNNTPCIPLRGTITASGD TRAAMIVRINTTLOGYSGIRFELILEAITKFLNNNTPCIPLRGTITASGD | Sunflower |
| 151 | LVPLSYIAGLITGRPN SKAVGPAGEVINAESAFAOAGVEGFFELQPKEG LVPLSYIAGLITGRPN SKAVGPAGEVINAESAFAOAGVEGFFELQPKEG | Lettuce |
| 201 | LAUUNGTAVGSGMASMVLFEANVIALLESEVISALFAEVMOGKPEFTDHLT LAUUNGTAVGSGMASMVLFEANVIALLESEVISALFAEVMOGKPEFTDHLT | Sunflower |
| 251 | HKLKHHPGQIEAAAIMEYILDGSDYVKAQVKHEMDPLOPKODRYALRT HKLKHHPGQIEAAAIMEYILDGSDYVKAQVKHEMDPLOPKODRYALRT | Lettuce |
| 301 | SPQWLIGPOIEVRSATKMIERIEINSVNDNPLIDVSRNKALHGGNFQGTP SPQWLIGPOIEVRSATKMIERIEINSVNDNPLIDVSRNKALHGGNFQGTP | Sunflower |
| 351 | GVSMMDNTRALAAIGKWTIAQFSELVNDFYNNGLPSHLSGGRNPSLDSGF GVSMMDNTRALAAIGKWTIAQFSELVNDFYNNGLPSHLSGGRNPSLDSGF | Lettuce |
| 401 | GVSMMDNTRALAAIGKWTIAQFSELVNDFYNNGLPSHLSGGRNPSLDSGF GVSMMDNTRALAAIGKWTIAQFSELVNDFYNNGLPSHLSGGRNPSLDSGF | Sunflower |
| 451 | KGGEIAMASYCSELQFLIANPVTHVOSAEQHNQDVNSLGLISARKTAEAV KGGEIAMASYCSELQFLIANPVTHVOSAEQHNQDVNSLGLISARKTAEAV | Lettuce |
| 501 | DILKLMSSTYLVALCOSIDIRHLEENMKSTVKNTVSQVAKVLTMGYNGE DILKLMSSTYLVALCOSIDIRHLEENMKSTVKNTVSQVAKVLTMGYNGE | Sunflower |
| 501 | IHPSRFCERDLRVVDREYVAYADDEPCTTYPMOKRLQVLDHALNING IHPSRFCERDLRVVDREYVAYADDEPCTTYPMOKRLQVLDHALNING | Lettuce |
| 551 | IHPSRFCERDLRVVDREYVAYADDEPCTTYPMOKRLQVLDHALNING IHPSRFCERDLRVVDREYVAYADDEPCTTYPMOKRLQVLDHALNING | Sunflower |
| 601 | ETEKANTSIIFQRIATEDELIKATILPKEVESVRAFENGTMISIPNRKAC ETEKANTSIIFQRIATEDELIKATILPKEVESVRAFENGTMISIPNRKAC | Lettuce |
| 601 | ETEKANTSIIFQRIATEDELIKATILPKEVESVRAFENGTMISIPNRKAC ETEKANTSIIFQRIATEDELIKATILPKEVESVRAFENGTMISIPNRKAC | Sunflower |
| 651 | RSYPLYREVRELGGAA----- RSYPLYREVRELGGAA----- | Lettuce |
| 651 | RSYPLYREVRELGGAA----- RSYPLYREVRELGGAA----- | Sunflower |
| 667 | -----T. -----T. | Lettuce |
| 701 | -----T. -----T. | Sunflower |

Figure 9

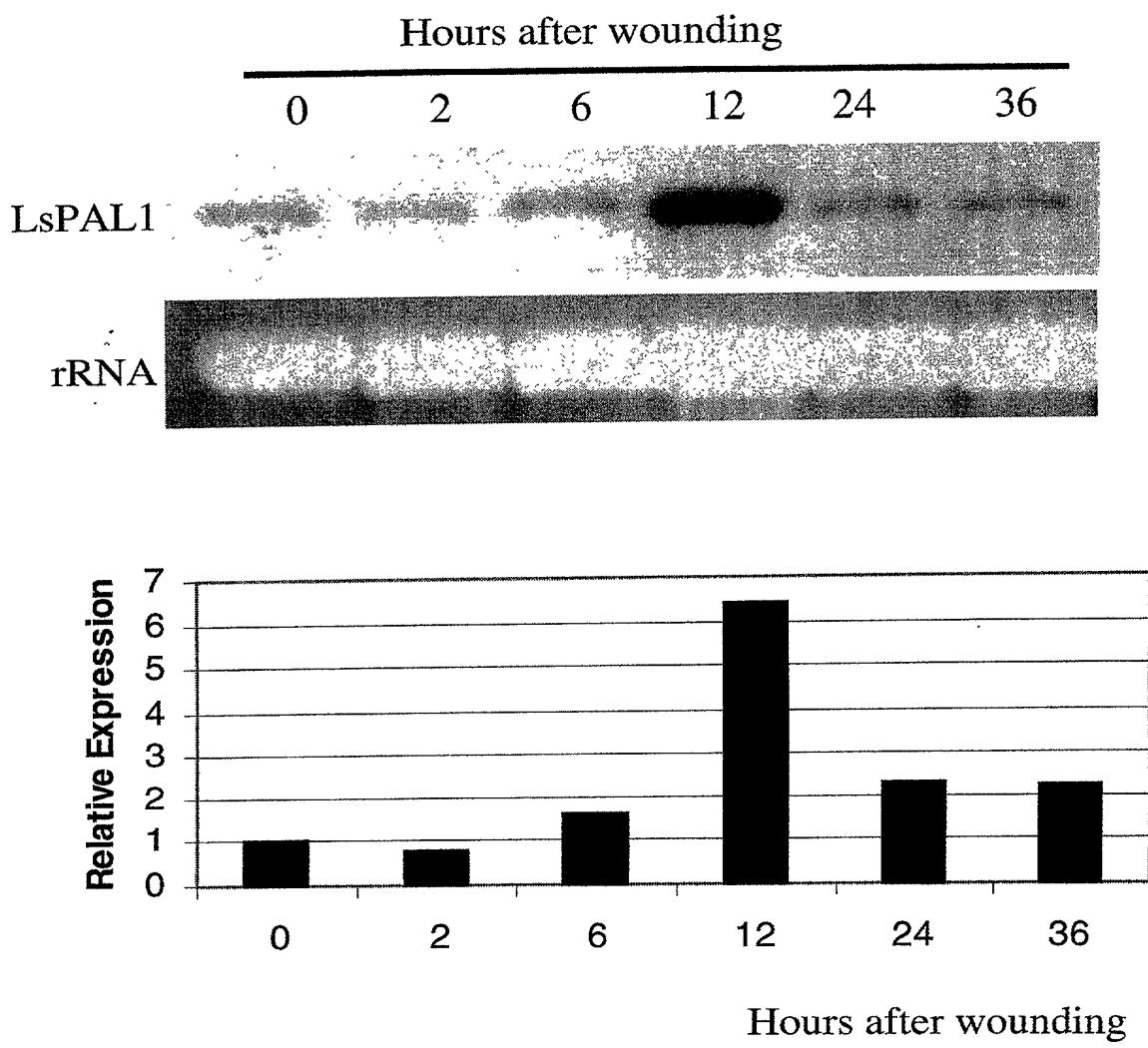


Figure 10

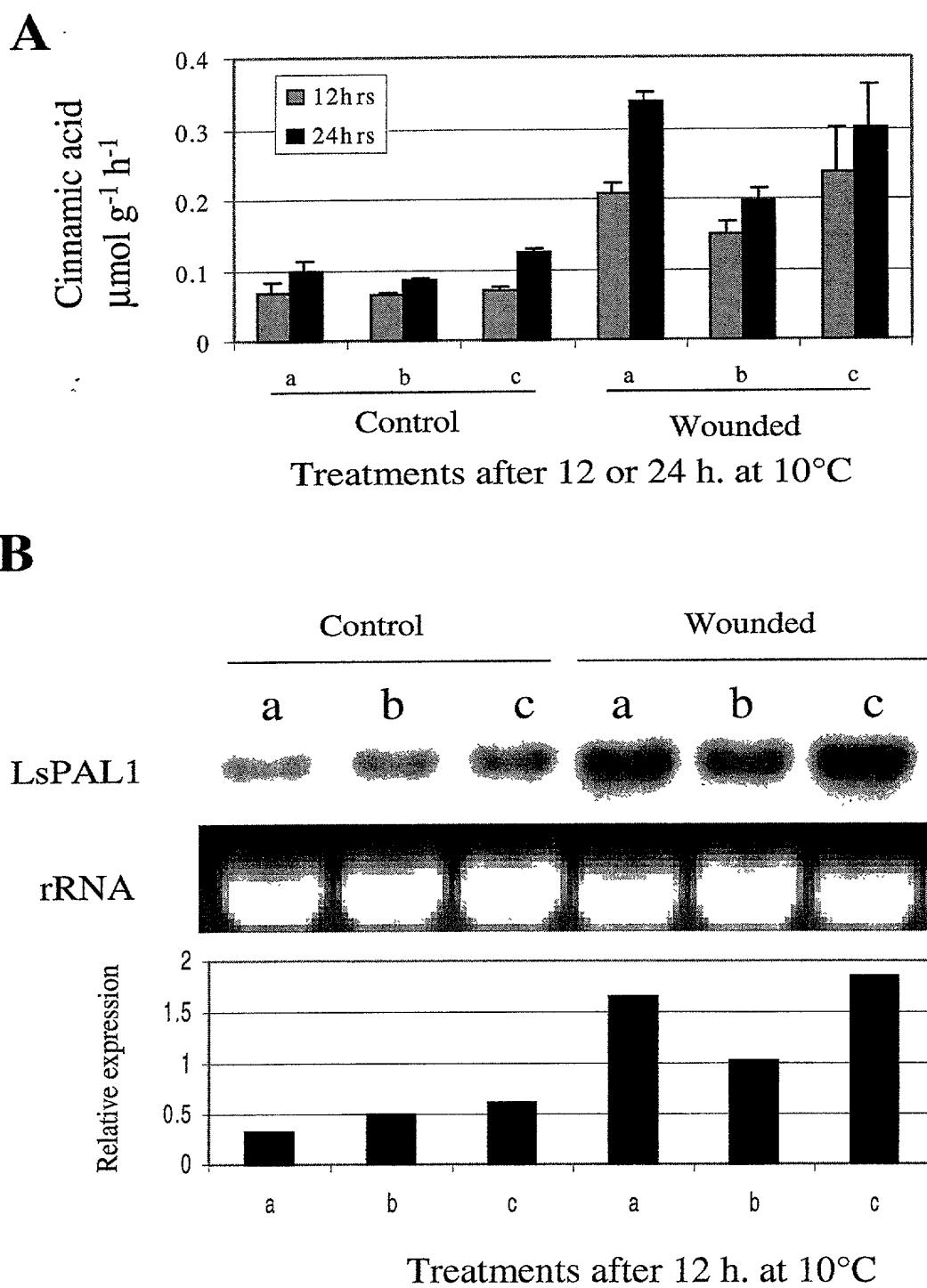
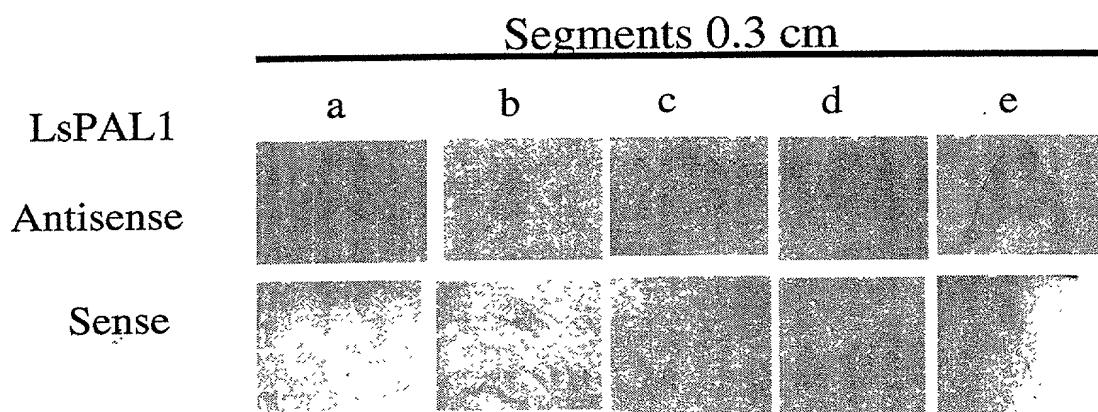
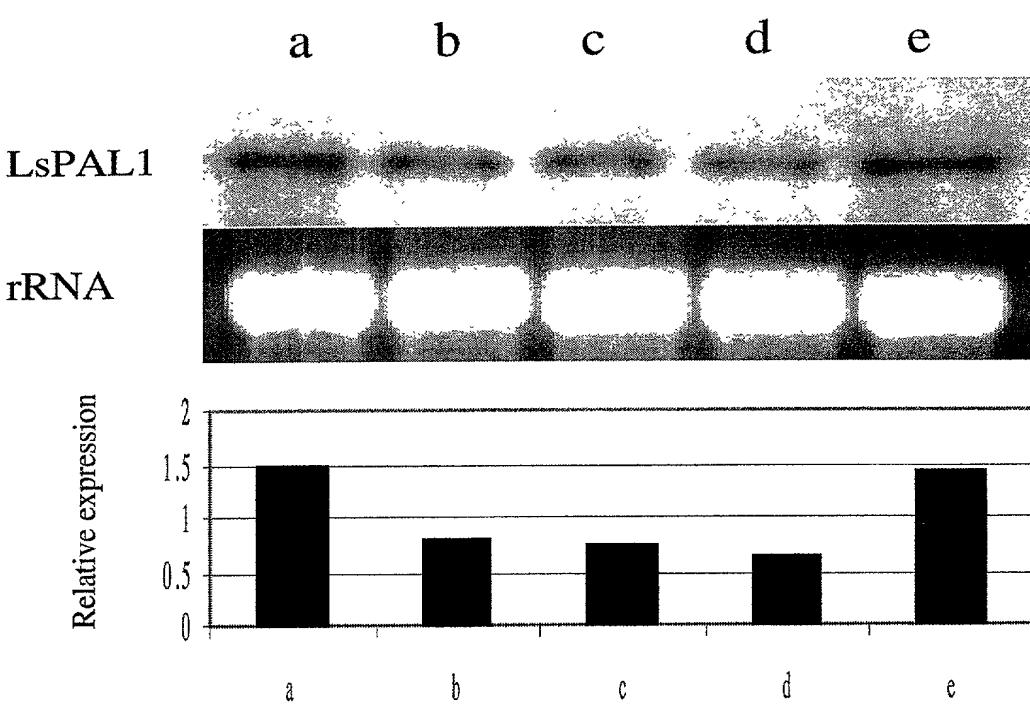


Figure 11

A**B**

Northern from pieces in A

Figure 12